

REMARKS

Claims 1-24, 26-36, 38-47, and 49-61 were pending in the application. The final office action, dated October 7, 2010, rejects all claims. In view of the amendments to the claims and the following remarks, Applicants herein respectfully request withdrawal of the rejections. Claims 1-24, 26-36, 38-44, 46, 47, and 49-61 remain pending in the application.

Independent claims 1, 18, 38, and 58 and dependent claims 11, 46, 47 are amended herein to more clearly recite Applicants' invention. Claims 12 and 45 are canceled. Applicants are not conceding that the subject matter encompassed by the claims prior to this Amendment is not patentable over the art cited by the Examiner. Claims 1, 11, 18, 38, 46, 47, and 58 are amended and claims 12 and 45 are canceled in this Amendment solely to facilitate expeditious prosecution of the application. Applicants respectfully reserve the right to pursue claims, including the subject matter encompassed by claims 1-24, 26-36, 38-47, and 49-61 as presented prior to this Amendment as well as additional claims in one or more continuing applications.

Objection of Claims

The Office Action objects to claim 47 for an informality. Claim 47 is amended to correct this informality, namely, by establishing proper dependency from claim 46. Withdrawal of the objection is therefore respectfully requested.

Rejection of claims under 35 U.S.C. 112

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, for failing to comply with the enablement requirement. Claim 12 is canceled. Therefore, its rejection is rendered moot.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Contrary to the Office Action, claim 1 refers to a “valve pin,” not a “pin valve.” Claim 9 on the other hand refers to a “pin valve having a pin....” This feature of claim 9 is illustrated at least at FIG. 7 of Applicants’ drawings. Applicants therefore respectfully request withdrawal of the rejection of claim 9.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 11 is amended to replace “a” with “the” to overcome the rejection. Applicants therefore respectfully request withdrawal of the rejection of claim 9.

Claim 45 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 45 is canceled. Therefore, its rejection is rendered moot.

Rejection of Claims Under 35 U.S.C. 102(b)

Claims 1-9, 11, 12, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Tchebinyayeff (U.S. Patent No. 4,306,587). Applicants respectfully traverse the rejection because Tchebinyayeff does not teach or suggest all the limitations recited in these claims.

Applicants’ invention as recited in claim 1 as now set forth in relevant part includes a pin valve assembly comprising a fluid plate with a fluid channel. A pin valve seat is in communication with the fluid channel between a first portion of the fluid channel and a second portion of the fluid channel. A pin valve seat is aligned to receive the valve pin. When the valve pin is seated in the pin valve seat, the flow of fluid in the fluid channel of the fluid plate is substantially blocked from flowing between the first and second portions of the fluid channel.

Tchebinyayeff teaches a paint distributor that includes an axial passage 2 for conveying paint or varnish to a spray device. A plurality of smaller passages 4

extend from the axial passage 2. The smaller passages 4 are opened and closed by a point 9 of a needle 8 coupled to a valve 7. In particular, a passage 4 is closed when the point 9 of the needle 8 rests on a member 10 forming a seat that is positioned above the axial passage 2 and a smaller passage 4. When the passage 4 is closed, paint of a given tint is prevented from flowing between a conduit 11 in the valve 7 and the axial passage 2.

The Office Action refers to the smaller passage 4 of Tchebinyayeff as being a fluid channel. However, the member 10 forms a seat at an end of the passage 4, not between a first portion and a second portion of the passage 4. Moreover, although the point 9 of the needle 8 can close the passage 4 to block paint from flowing to or from the axial passage 2, the point 9 blocks the same end of the passage 4 as where the member 10 is positioned. However, there is no teaching or suggestion in Tchebinyayeff that when the point 9 of the needle 8 is seated in the member 10, the paint is blocked at a point along the passage to prevent paint from flowing between the first and second portions of the passage 4. Instead, the entrance to the passage 4 is blocked by the seating member 10 so that paint is prevented from entering the passage 4.

For at least these reasons, Applicants submit that Tchebinyayeff does not teach or suggest the limitations identified above in amended independent claim 1. Applicants therefore respectfully request withdrawal of the rejection of independent claim 1.

Dependent claims 2-9, 11, and 15 depend from independent claim 1, and are patentable for at least those reasons presented above in connection with independent claim 1. Claim 12 is canceled. Applicants therefore respectfully request that the rejection against these claims also be withdrawn.

Claims 18, 22, 24, 26, 32, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Hammock (U.S. Patent No. 2,589,373). Applicants respectfully traverse the rejection because Hammock does not teach or suggest all the limitations recited in these claims.

Applicants' invention as recited in claim 18 as now set forth in relevant part includes a pin valve assembly comprising a pin valve seat between a first portion of a fluid channel and a second portion of the fluid channel. The pin valve seat is aligned to receive a valve pin. When the valve pin is seated in the pin valve seat, the flow of fluid in the fluid channel of the fluid plate is substantially blocked from flowing between the first and second portions of the fluid channel.

Hammock teaches an adjustable choke for oil wells. The choke includes a chamber 39 between a disk 14 and a head 15. A plurality of ports 41 extends through the disk 14, and a beveled seat 40 is positioned in each port 41. The ports 41 can be closed by corresponding seating members 37 that are positioned against the seats 40 to prevent well fluid from flowing through the ports 41. Although Hammock teaches that a seating member 37 can be seated in the seat 40 to prevent well fluid from flowing from the chamber 39 through the port 40, Hammock does not teach a fluid plate having a fluid channel having a first and a second portion where the valve seat is located between portions, such that a flow of fluid is substantially blocked. Instead, it is the entrance to the port 41 that is blocked by the seating member 37.

For at least these reasons, Applicants submit that Hammock does not teach or suggest the limitations identified above in amended independent claim 18. Applicants therefore respectfully request withdrawal of the rejection of independent claim 18.

Independent claim 58 as amended above recites claim language similar to that of independent claim 18 and therefore, are patentable for at least those reasons provided in connection with claim 18. Dependent claims 22, 24, 26, 32, depend from independent claim 18, and are patentable for at least those reasons presented above in connection with independent claim 18. Applicants therefore respectfully request that the rejection against these claims also be withdrawn.

Rejection of Claims Under 35 U.S.C. 103(a)

The Office Action rejects claims 1-9, 11-13, 15, 18-24, 26, 27, 32-35, 38-47, 49, 55, 56, and 58 under 35 U.S.C. § 103 as being unpatentable over Paul (U.S. Patent No. 5,320,139) in view of Tchebinyayeff. Applicants respectfully traverse the rejection because the combination of Paul and Tchebinyayeff does not teach or suggest all the limitations recited in these claims.

As noted in the Office Action, Paul does not teach a valve pin seat as claimed. The Office Action cites Tchebinyayeff as teaching a valve pin seat 10. However, as described above, Tchebinyayeff fails to teach or suggest that when a valve pin is seated in the pin valve seat 10, a flow of fluid is substantially blocked from flowing between two portions of a fluid channel, as recited in amended independent claim 1. Therefore, the combination of Paul and Tchebinyayeff does not teach or suggest a pin valve seat in communication with a fluid channel between a first portion of the fluid channel and a second portion of the fluid channel, wherein when a valve pin is seated in the pin valve seat, the flow of fluid in the fluid channel of the fluid plate is substantially blocked from flowing between the first and second portions of the fluid channel, as set forth in amended independent claim 1.

Accordingly, Applicants submit that claim 1 is patentable over the combination of Paul and Tchebinyayeff, and respectfully requests withdrawal of this rejection.

Independent claims 18, 38, and 58 as amended above recite claim language similar to that of independent claim 1, and therefore claims 18, 38, and 58 are patentable for at least those reasons provided in connection with claim 1. Dependent claims 2-9, 11-13, 15, 19-24, 26, 27, 32-35, 39-47, 49, 55, and 56 depend from and incorporate all of the limitations of the patentable independent claims 1, 18, and 38, respectively, and are therefore patentable for at least those reasons presented above in connection with the independent claims. Applicants therefore respectfully request entry of the amendments and reconsideration and withdrawal of the rejections of these claims.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

In view of the remarks made herein, Applicants submit that the application is in condition for allowance and request early favorable action by the Examiner.

If the Examiner believes that a telephone conversation with the Applicants' representative would expedite allowance of this application, the Examiner is cordially invited to call the undersigned at (508) 303-2003.

Respectfully submitted,

Amendment and Response
Attorney Docket No.: W-355-6-7-02 (WAT-029)
Application No. 10/597,525
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Date: December 2, 2010
Reg. No. 45054

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